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ABSTRACT

Interbehavioral psychology represents an important innovation for clinical psychology in general, and for behavior modification in particular. Most theories of deviance acknowledge the role of a person's past history in the determination of behavior. Unfortunately, this history is often transformed into the supposed effects of current and continuous mental processes or entities. Interbehavioral psychology rejects this mentalism, yet retains the important place of a person's history. Three types of mentalistic explanations of deviance involve: (1) mental and biological processes; (2) mental and biological traits; and (3) situationism. These ahistorical approaches to deviance divert attention from the continuous process of person/environment interactions. When behavior is analyzed in terms of an interbehavioral history of confrontable events, concrete moves can be made in the description, prediction, and control of behavior. Some of these concrete moves involve "setting factors," i.e., contextual conditions (such as drug use) that influence which stimulus-response functions, previously established through an interbehavioral history, will occur at a particular time. Interbehavioral psychology offers an integrated-field or systems theory that conceptualizes interactions among the various factors in the field as mutual, reciprocal, and dynamic. Interbehavioral psychology rejects the assumption that causes can be reduced to a single, discrete agent. (JAC)

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Interbehavioral Perspectives on Crime and Delinquency

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This paper is an abbreviated version of a symposium of the same title by the same authors presented at the 1984 meeting of the Association for Behavior Analysis (Morris, 1984). The authors of the present paper are listed alphabetically after the first author, from whom reprints may be obtained, Department of Human Development, Haworth Hall, University of Kansas, Lawrence, Kansas 66045.

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Interbehavioral Perspectives on Crime and Delinquency

In describing how one might discern important innovations in the arts, the British author, Philip Larkin (1984), cautioned, "You have to distinguish between things that seemed odd when they were new but are now quite familiar, such as Ibsen and Wagner, and things that seemed crazy when they were new and that seem crazy now, like Finnegan's Wake and Picasso." We might, perhaps, quibble with Mr. Larkin's taste, but we should not overlook his caveat. Innovations in clinical psychology have always proliferated. Important innovations, though, are difficult to discern. For some, behavior modification seemed an odd innovation when it was new, and is still not yet familiar -- perhaps because it has seemed mechanistic. For others, behavior modification seemed crazy once and continues to seem so now -- perhaps because it has seemed naive.

This present symposium is based, in part, on the presumption that interbehavioral psychology represents an important innovation for clinical psychology, in general, and for behavior modification, in particular. In our own paper, we present and discuss some implications of the interbehavioral perspective in that most intractable of areas -- crime and delinquency. Although many implications could be drawn, we have chosen to focus on that characteristic of the approach which avoids mechanism and recognizes the complexity of behavior. That characteristic is its contextualism. In focusing on contextualism, we cover in order (a) interbehavioral history, (b) setting factors, and (c) the field-integrated perspective.

Interbehavioral History

Interbehavioral history refers to the history of past interactions between people and their environments. Interbehavioral history -- both

phylogenetic and ontogenetic -- is the source through which all the response functions of behavior and all the stimulus functions of the environment are established and modified. This process is a continuous one, and the resultant stimulus and response functions are reciprocally related in strong, dynamic interaction.

Almost every theory of deviance acknowledges the role of a person's past history in the determination of behavior. Unfortunately, this history is often transformed into the supposed effects of current and contiguous mental processes or entities. Interbehavioral psychology rejects this mentalism, yet retains the important place of a person's history. In this section of the paper, we briefly examine three types of mentalistic explanations of deviance and illustrate the advantages that the interbehavioral perspective on historical causation has over them (see Todd & Morris, 1984).

Mental and Biological Processes

One common form of mentalism explains deviance in terms of active mental or biological processes that intervene between stimulus-response function interactions. Typically, processes within the organism are said to mediate the effect of the environment on behavior.

For example, in their influential book, The Criminal Personality, Yochelson and Samenow (1976) proposed that certain criminal behaviors result from what they called "criminal thinking patterns" which possess a number of characteristics, such as energy and anger. In describing the effects of these mental processes, Yochelson and Samenow presented the case of a criminal under their treatment who nearly commits a crime after having experienced difficulties having his car repaired. They explained this near-criminal activity in terms of the "metastasis" or malignant spread of his anger, a process that does not occur in the noncriminal.

From an interbehavioral perspective, these criminal thinking patterns and their characteristics are no more than reified constructs or descriptions of correlated activity. As reified constructs, the angry thinking patterns are inferred from the deviant behavior and are not indpendently assessed. As correlated activity, neither the thinking patterns nor the angry behavior is explained in terms of the history of and current controlling relations in the person-environment interactions. An analysis of the interbehavioral history of the person who overreacted to car repair problems might have revealed the development of stimulus and response functions that led to the overreaction, and to the anger to which the overreaction was attributed. Moreover, appropriate knowledge of the interbehavioral history might contribute to programs for modifying deviant stimulus and response functions so as to alter the future probability of criminal behavior, as well as contribute to predictions about future criminal behavior that might not be obtained through brief behavioral assessments.

Mental and Biological Traits

A second common form of mentalism explains behavior in terms of hypothetical mental or biological entities or traits within a person. In what follows, we discuss biologically-based trait theories because of the renewed attention being given such factors as causes of crime and delinquency (e.g., Hartl, Monnelley, & Elderkin, 1982). Such theories are often thought to be simply reductionistic, but because they refer to the presence of hypothetical biological entities, rather than to demonstrated physiological action, these theories are also functionally mechanistic.

Many genetic theories of deviance focus on the supposed manifestation of genetic traits within the present person-environment interaction. The

traits are seen as ever-present entities in the control of current behavior, and not as convenient empirical summaries of the effects of past history, both phylogenetic and ontogenetic. One currently popular genetic trait theory involves the male XYY genotype and its correlation with a larger than average somatotype and low intelligence scores. Numerous studies have reported that a higher incidence of XYY males are found among institutionalized men than in the population at large (e.g., Jacobs, Brunton, Mellville, Brittain, & McClemont, 1965). These data, in turn, have been taken to support the claim that the XYY genotype is a cause of criminality through heightened aggressive tendencies (e.g., Neilson & Tsuboi, 1969; Price & Whatmore, 1967).

Recent studies and reanalyses of the data have shown that no direct cause exists between the XYY genotype and heightened aggression, despite the correlation (e.g. Pyeritz, Schrier, Madansky, Miller, & Beckwith, 1977). Because most early studies were based on the premise that inner traits, whatever their origin, are the causes of behavior, interbehavioral history was overlooked and no other factors were considered that might might have explained the correlation. The interbehavioral approach would have viewed the XYY genotype as but one factor in a person's interbehavioral history, and would have sought information on such social processes as how the behavior of XYY individuals comes to be differentially shaped and differentailly judged antisocial, and how it differentially results in arrest and conviction.

Situationism

The most common alternative to mentalistic theories of deviance has been to place the causes in the current environment. This alternative is often referred to as "situationism." Situationism, though, actually has a great deal in common with mentalism, in that the environment, like the

person is said to possess some inherent, immediate, and contiguous power to cause or control behavior. From an interbehavioral perspective, however, situationism fails to take into account the historically derived functional relationships between people and their environments (see Morris, 1982, p. 208-209).

Interbehavioral psychology offers several corrective perspectives here. First, situationism has difficulty handling individual differences in the presence of structurally similar environments -- some people emerge from certain debilitating social conditions crime-free, while others emerge highly involved in deviant activity. From an interbehavioral perspective, though, the same environment can have different functions for different people depending on individual interbehavioral histories. The function of the environment is not inherent within it. Second, situationism does not explain how certain events acquire or maintain their functions for behavior. Correlations between various demographic characteristics and behavior do not shed light on how those correlations came about. An examination of interbehavioral histories, though, focuses directly on the continuous development and evolution of stimulus functions. As such, interbehavioral history may illuminate important causal relationships and point variables that might be useful in altering deviant social interactions.

Conclusions

In summary, ahistorical approaches to deviance divert attention from the continuous process of person-environment interactions. When behavior is analyzed in terms of an interbehavioral history of confrontable events, concrete moves can be made in the description, prediction, and control of behavior. What some of these concrete moves may be can be illustrated by a

discussion of setting factors, to which we now turn.

Setting Factors

Setting factors are contextual conditions that influence which stimulus-response functions, previously established through an interbehavioral history, will occur at a particular time (Larsen & Morris, 1983). In other words, setting factors serve a meta-function as the contexts that affect which stimulus and response functions will be facilitated or inhibited; setting factors are not defined by any formal characteristics. The only formal characterization of setting factors is in terms of their locus of action -- organismic or environmental -- an organization we use in presenting the material to follow.

Organismic Setting Factors

Organismic setting factors refer to the effects of physiological activity to affect the occurrence of stimulus-response function interactions (Kantor, 1947, p. 287). Among the organismic setting factors thought to be closely related to aggressive and criminal activity are drugs (see Johnson & Morris, 1984). In examining drugs as setting factors, we focus on two particular topics: (a) conceptual problems in drug-crime research and (b) the causal status of drugs in violent crime.

Conceptual problems in drug-crime research. A number of conceptual problems exist in the drug-crime literature that might be lessened by taking an interbehavioral approach. Perhaps the major problem this that the research lacks an overall conceptual framework (see Roizen & Schneberk, 1977). Like the rest of psychology, this area of inquiry is composed of many independent theories, each limited in scope.

One of the clearest manifestations of this problem is that research on drugs and crime is often focused on but one variable at a time. This practice has led to the implicit assumption that single-variable, direct

relationships can describe a causal connection between drug-taking and crime (see Greenburg, 1981). In contrast, an interbehavioral perspective argues that no particular factor in a field can be said to have primary causal status -- the entire situation must be taken into account (cf. Gersick, Grady, Sexton, & Lyons, 1981; McKearney, 1977). This implies that clinical practice should not focus just on treating the drug problem with, for instance, a methadone program, but that other factors related to drug abuse must also be considered, as in vocational and social skills.

The single-factor approach has also lead to naive questions about the relationship between drugs and crime. Answers to questions such as, "Does drug use cause violent crime?" are not likely to lead to effective action, whereas answers to questions such as, "Under what conditions and in what combinations are drugs and crime related?", are more likely to be effective because those answers will be specific and contextually qualified.

The causal status of drugs in violent crime. With respect to the causal status of drugs in violent crime, a common assumption is that illicit drug use is a primary organismic cause of violence and aggression (Seigal, 1978; Szaz, 1974). This logic is exemplified in the many drug laws and drug treatment programs which assume that an exclusive focus on the pharmacological aspects of drug abuse will decrease crime. Popular assumptions aside, the facts are that no illicit drug is necessary nor sufficient for violent crime.

We do not mean to overlook the many statistical correlations between drug use and violent crime. The question is how to interpret them in light of the weak evidence for direct causal relationships. The interbehavioral perspective, with its emphasis on contextual variables, helps reconcile these apparently inconsistent findings. Drugs, as organismic variables

possess chemical properties, but only behavioral possibilities. Whether a drug operates as an organismic setting factor depends not only on the physiological changes it produces inside the organism, but also on the person's cultural and individual history and on other aspects of the current environment. Drugs may participate in violent crime, but only in combination with a wide variety of other factors.

Conclusion. Thus, although drugs can operate as organismic setting factors that affect the probability of criminal and delinquent behavior, they like any other factor in the field do not operate in isolation from the context of established stimulus-response relationships, interbehavioral history, or environmental setting factors, the last of which we turn to now.

Environmental Setting Factors

Environmental setting factors may be formally classified as either physical-chemical or social-cultural in nature (see Bijou & Baer, 1978). An example of the former is the variations in lighting and architectural arrangements that affect the stimulus functions people may have for one another thereby affecting the probability of such crimes as theft and rape (National Advisory Committee, 1973). An example of a social-cultural setting factor would be the presence or absence of peers that facilitate or inhibit the occurrence of delinquency (Aultman, 1980), or the aversive nature of some social interactions that affects the probability of violence (Felson & Steadman, 1983; Wahler & Fox, 1981). In our examination of environmental setting factors, here, however, let us focus on their implications for (a) interdisciplinary research and (b) for treatment generalization and maintenance.

Interdisciplinary research. Environmental setting factors emphasize that the causes of deviance cannot be determined independently of the

broader context. By including setting factors and setting factor-like concepts (e.g., Michael, 1982) in the analysis of deviance, new areas of research and application are being established, as exemplified by investigations of delinquency that examine such ecological factors as parent-community interactions (e.g., Wahler & Graves, 1983) and family interactions processes (e.g., Serna, Hazel, Schumaker, & Sheldon, 1984).

Research in these areas, however, has not illuminated all the conditions contributing to delinquency. Fortunately, however, social scientists from other disciplines can offer research that points out broad social factors that should be considered, such as poverty (e.g., Chester, 1976), employment (e.g., Glaser, 1964), and education (e.g., Burke & Simons, 1965), as well as to more specific factors, such as parental negligence (e.g., Robbins & Ratcliff, 1978), marital conflict (e.g., Rutter, 1979), and poor family management practices (e.g., Wadsworth, 1979).

Other social scientists, then, can point out important setting factors that might otherwise be overlooked by clinical pratitioners, who in turn can develop procedures for evaluating the importance of these factors in individual cases and who can also suggest further areas for general, descriptive social science research. The clinician and the social scientist could be working together to better effect.

Generalization and maintenance. The generalization and maintenance of treatment gains across time, settings, and behaviors have been difficult to attain in most correctional programs. The interbehavioral perspective, though, may have some useful implications here.

The first implication is a rather broad one -- the literature on generalization and maintenance lacks a general conceptual framework. The

extant articles on generalization outline various strategies drawn from successful practices (e.g., Stokes & Baer, 1977), but these practices are rarely tied to an overall conceptual analysis of the problem. While specific techniques may be quite useful (e.g., Fowler & Baer, 1981), when they fail, no further directions are suggested. A conceptualization of generalization and maintenance as differences among setting and other field factors can usefully supplement the technology at hand, and is compatible with other approaches, such as Kirby and Bickel's (Kirby, Bickel, & Holburn, 1983), that analyze generalization in terms of stimulus control. By developing an approach to generalization based on a conceptual model, rather than through specific techniques, the probability is increased that the behavior of practitioners will generalize to new problems when techniques fail.

The second implication of interbehavioral psychology for generalization and maintenance is an obvious one -- environmental setting factors cannot be overlooked. Although reinforcing and discriminative stimuli can be carefully programmed for across settings and time, no stimuli will have these functions without appropriate setting factors, among which will be various conditions of deprivation and satiation, schedules of reinforcement and punishment, and instructions. Correctional programs that focus simply on deviant behavior and the specific stimuli that apparently control it, are not likely to succeed unless they also take into account the larger social context.

Conclusions. The concept of environmental setting factors, then, may have useful implications for integrating diverse areas of research and for generalization and maintenance. But, examining these factors apart from the general integrated-field characteristic of interbehavioral psychology would be shortsighted, hence let us turn to the final section of this

paper.

The Integrated-Field Perspective

Interbehavioral psychology offers an integrated-field or systems theory that conceptualizes interactions among the various factors in the field as mutual, reciprocal, and dynamic. Interbehavioral psychology rejects the assumption that causes can be reduced to a single, discrete agent. Causation is best defined as the co-presence of all the particitpating factors within a field (Kantor, 1950). Let us provide an example here by briefly examining the implications of this perspective for understanding and intervening into family interaction processes related to delinquency (see Powell, Atwater, & Morris, 1984).

Family Interaction as a System

By conceptualizing family interactions as a system, the focus of research and intervention moves from the simple examining of how the behavior of one person affects that of another, to an examination of the functional relationships that involve the behavior of all family members. These mutual and reciprocal influences can then be examined for "patterns" of interactions within a family (Bateson, 1973). Given that certain patterns may be uniquely related to particular outcomes, such as delinquency, researchers can then focus their efforts in two ways. First, they can attempt to identify recurrent patterns that characterize families of delinquents and that differentiate those families from others. And, second, once specific patterns are related to delinquency, intervention strategies can be devised that would be appropriate to a particular family in question and that might also have some generality to families exhibiting similar patterns. By proceding in this manner, the inherent nature of the interactions can be maintained, as well as a more adequate picture of the

problem under investigation.

Research Methods for Analyzing Systems

The concept of patterning leads to a second implication of an interbehavioral perspective -- researchers should employ experimental methods that retain the naturally occurring order of events and the reciprocal nature of the interactions.

The raw materials for studying family interaction patterns are the interactive behavior-behavior relationships as they occur in nature. Oftentimes, however, the ordering of these events is lost or ignored when data are converted into various forms for analysis. Moreover, most research methods employ unidirectional analyses in which the influence of parents on their children is studied in isolation from the effects of the children on their parents. These research methods "segment" the ongoing sequences of behavior-behavior interactions, thereby destroying the very patterns of interest.

In order to retain the interlocking nature of these patterns, alternative methods of analysis are required. Among the methods that might be useful are Markov chain analyses (Suppeys & Atkinson, 1960), lag sequential analyses (Sackett, 1979), and information theory analyses (Attneave, 1959) -- all of which are derived conceptually from conditional sequential dependencies among events occurring over time. The focus of family process research that employs these methods, however, has been primarily descriptive and not oriented to clinical intervention, the point to which we now turn.

Intervention into Family System

By taking an interbehavioral approach to family interaction patterns, each of the factors in the interbehavioral field, as well as the specific variables comprising each factor, are identified as possible points of

intervention. In the family process research conducted to date, the assumption is made that intervening into the interaction patterns at these points will have a direct effect on deviant behavior. Except for the work of some, such as Patterson (e.g., Patterson, 1983) and Alexander (e.g., Alexander & Parsons, 1973), however, few attempts have been made to translate the results of this descriptive research into actual intervention strategies. And, even when interventions are effective in altering family interaction patterns, the link to reductions in delinquency is not always clear. Patterson's and Alexander's research, though, points to the fruitfulness of integrating field-descriptive analyses of the multiple interactive factors in a family system with intervention programs. Much more research, though, remains to be done.

Conclusion

We began this paper with a illustrative quote from Philip Larkin about the arts, so let us conclude with another. On the topic of contemporary poetry, Larkin (1984) has commented, "We seem to be producing a new kind of bad poetry, not the old kind that tries to move the reader and fails, but one that does not even try."

A perusal of the clinical literature in crime and delinquency, and even of national policy in the United States, suggests that bad poetry of both sorts is being produced -- some of it tries but fails to move the practitioner, and some of it does not even try. These problems may stem, in part, from the limited effectiveness of many past attempts to produce long-lasting clinical gains and from the legal issues that arise from the sometimes mechanistic application of various behavioral technologies. The natural science of behavior, however, has continued to evolve in comprehensiveness and conceptual adequacy from mechanism to contextualism

and the integrated-field perspective (cf. Dewey & Bentley, 1949; Einstein & Infeld, 1938; Kantor, 1946). From the latter will come innovative clinical practices. The effects of these practices, however, can only be determined if the practices are implemented. That is the task at hand.

References

Alexander, J. F., & Parsons, B. V. (1973). Short-term behavioral intervention with delinquent families: Impact on family process and recidivism. Journal of Abnormal Psychology, 81, 219-223.

Attneave, F. (1959). Application of information theory to psychology. New York: Holt.

Aultman, M. G. (1980). Group involvement in delinquents: A study of offense types and male-female participation. Criminal Justice and Behavior, 7, 185-192.

Bateson, G. (1983). Steps to an ecology of the mind. New York: Ballantine.

Bijou, S. W., & Baer, D. M. (1978). Behavior analysis of child development. Englewood Cliffs, NJ: Prentice-Hall.

Burke, N. S., & Simons, A. E. (1965). Factors which precipitate dropouts and delinquency. Federal Probation, March, 28-32.

Chester, C. R. (1976). Relative deprivation as a cause of property crime. Crime and Delinquency, 22, 17-30.

Dewey, J., & Bentley, A. F. (1949). Knowing and the known. Boston: Beacon Press.

Einstein, A., & Infeld, L. (1938). The evolution of physics. New York: Simon and Schuster.

Felson, R. B., & Steadman, H. J. (1983). Situation factors in disputes leading to criminal violence. Criminology, 21, 59-74.

Fowler, S., & Baer, D. M. (1981). "Do I have to be good all day?" The timing of delayed reinforcement as a factor in generalization. Journal of Applied Behavior Analysis, 14, 13-24.

Gersick, K. E., Grady, K., Sexton, E., & Lyons, M. (1981). Personality and sociodemographic factors in adoelscent drug use. In D. J. Lettieri &

J. P. Ludford (Eds.), Drug abuse and the american adoelscent (DHHS Publication No. ADM 81-1166; Research Monograph No. 38, pp. 39-56). Rockville, MD: National Institute on Drug Abuse.

Greenburg, S. W. (1981). Alcohol and crime: A methodological critique of the literature. In J. J. Collins (Ed.), Drinking and crime: Perspectives on the relationships between alcohol consumption and criinal behavior (pp. 70-109). New York: The Guilford Press.

Hartl, E. M., Monnelly, E. P., & Elderkin, R. D. (1982). Physique and delinquent behavior. New York: Academic Press.

Jacobs, P. A., Brunton, M., Melville, M. M. Brittain, R. P., & McClemant, W. F. (1965). Aggressive behavior, mental subnormality, and the xy male. Nature, 213, 815.

Johnson, L. M., & Morris, E. K. (1984, May). Organismic setting events: Drug-behavior interactions. In E. K. Morris (Chair), Interbehavioral perspectives on crime and delinquency. Symposium conducted at the meeting of the Association for Behavior Analysis, Nashville, TN.

Kantor, J. R. (1946). The aim and progress of psychology. American Scientist, 34, 251-163.

Kantor, J. R. (1947). Problems in physiological psychology. Granville, OH: Principia Press.

Kantor, J. R. (1950). Psychology and logic. Vol. II. Bloomington, IN: Principia Press.

Kirby, K. C., Bickel, W. K., & Holburn, S. W. (1983, May). Toward an explicit science of generalization: A stimulus control interpretation. Paper presented at the meeting of the Association for Behavior Analysis, Milwaukee.

Larkin, P. (1984). Required writing: Miscellaneous pieces, 1955-1982.

New York: Farrar, Straus, & Giroux.

Larsen, St. E., & Morris, E. K. (May, 1984). Ecological setting events: Intervention. In E. K. Morris (Chair), Interbehavioral perspectives on crime and delinquency. Symposium conducted at the meeting of the Association for Behavior Analysis, Nashville, TN.

McKearney, J. W. (1977). Asking questions about behavior. Perspectives in Biology and Medicine, 21, 109-119.

Michael, J. (1982). DIstinguishing between discriminative and motivational functions of stimuli. Journal of the Experimental Analysis of Behavior, 37, 149-155.

Morris, E. K. (Chair). (1984, May). Interbehavioral perspectives on crime and delinquency. Symposium presented at the meeting of the Association for Behavior Analysis, Nashville, TN.

National Advisory Commissions on Criminal Justice Standards and Goals (1973). Corrections. Washington, D. C.: U. S. Government Printing Office.

Neilsen, J., & Tsuboi, T. (1969). Intelligence, EEG, personality deviation and criminality in patients with xyy syndrome. British Journal of Psychiatry, 115, 965.

Patterson, G. R. (1983). Coercive family processes. Champaign, IL: Research Press.

Powell, L. K., Atwater, J. B., & Morris, E. K. (1984, May). Syatems analysis: Family interaction patterns. In E. K. Morris (Chair), Interbehavioral perspectives on crime and delinquency. Symposium conducted at the meeting of the Association for Behavior Analysis, Nashville, TN.

Price, W. H., & Whatmore, P. B. (1967). Criminal behavior and the XYY male. Nature, 208, 1351-1352.

Pyeritz, R., Schreide, H., Madansky, C., Miller, L., & Beckwith, J. (1977). The XYY male: The making of a myth. In Ann Arbor Science for the People Editorial Collective (Eds.), Biology as a social weapon. Minneapolis: Burgess.

Robins, L. N., & Ratcliff, K. S. (1978). Risk factors in the continuation of childhood antisocial behavior into adulthood. International Journal of Mental Health, 7, 96-116.

Roizen, J., & Schneberk, D. (1977). Alcohol and crime. In M. Aarens, T. Cameron, J. Roizen, R. Room, D. Schneberk, & D. Wingard (Eds.), Alcohol, casualities, and crime. Berkeley, CA: Social Research Group.

Rutter, M. (1979). Protective factors in children's responses to stress and disadvantage. In. M. Kent & J. E. Rolf (Eds.), Primary prevention & psychopathology. Vol. 3, Social competence in children. Hanover, NH: University of Press of New England.

Sackett, G. (1979). The lag sequential analysis of contingency and cyclicity in behavioral interaction research. In J. Osofsky (Ed.), Handbook of infant development. New York: Wiley.

Schnelle, J. F., Kirchner, R. E., Macrae, J. W., McNees, M. P., Eck, R. H., Snodgrass, S., Casey, J. D., & Uselton, P. H. (1978). Police evaluation research: An experimental and cost-benefit analysis of a helicopter patrol in a high crime area. Journal of Applied Behavior Analysis, 11, 11-21.

Serna, L. A., Hazel, S., Schumaker, J. B., & Sheldon, J. (1984, May). Teaching reciprocal skills to parents and their delinquent adoelscents. Paper presentation at the meeting for the Association of Behavior Analysis, Nashville, TN.

Siegal, R. K. (1978). Phenyclidine, criminal behavior, and the defense of diminished capacity. In R. C. Peterson & R. C. Stillman (Eds.), PCP - Phenycyclidine abuse: An appraisal (DHEW Publication No. 21, pp. 272-288). Rockville, MD: National Institute on Drug Abuse.

Stokes, T. F., & Baer, D. M. (1977). An implicit technology of generalization. Journal of Applied Behavior Analysis, 10, 349-367.

Suppeys, P., & Atkinson, R. V. (1960). Markov learning models for multiperson interactions. Stanford, CA: Stanford Press.

Szasz, T. (1974). Ceremonial chemistry: The ritual persecution of drugs, addicts and pushers. New York: Anchor Press/Doubleday.

Todd, J. T., & Morris, E. K. (1984, May). Interbehavioral history: An alternative to mental causes. In E. K. Morris (Chair), Interbehavioral perspectives on crime and delinquency. Symposium conducted at the Association for Behavior Analysis, Nashville, TN.

Wadsworth, M. (1979). Roots and delinquency: Infancy, adolescence, and crime. New York: Barnes & Noble, Inc.

Wahler, R. G., & Fox, J. J. (1981). Setting events in applied behavior analysis: Toward a conceptual and methodological expansion. Journal of Applied Behavior Analysis, 14, 322-338.

Wahler, R. G., & Graves, M. G. (1983). Setting events in social networks: Ally or enemy in child behavior therapy. Behavior Therapy, 14, 19-36.

Yochelson, S., & Samenow, S. E. (1976). The criminal personality. Volume I: A profile for change. New York: Jason Aronson.